

CLAIMS

1. An electrodeless low-pressure discharge lamp comprising
a discharge vessel enclosing a gas-tight discharge cavity containing an
ionizable fill, the discharge vessel having a light-transmitting bulb portion and a
reentrant tube protruding into the discharge cavity, the bulb portion and the
reentrant tube each having a surface facing to the discharge cavity;
a means arranged at least partially in the reentrant tube for exciting
discharge in the ionizable fill;
an UV-to-visible-converting layer applied only to said surface of the bulb
portion; and
an UV reflecting layer applied to said surface of the reentrant tube.
2. The electrodeless low-pressure discharge lamp of claim 1 in which the
means for exciting discharge in the ionizable fill comprises a supply electronics
surrounded by a housing and connected to a coil.
3. The electrodeless low-pressure discharge lamp of claim 1 in which the
UV-to-visible-converting layer comprises at least one phosphor layer activated
by at least one rare earth element.
4. The electrodeless low-pressure discharge lamp of claim 1 in which the
UV reflecting layer is made of one of the compounds belonging to the group of
 Al_2O_3 , anatase TiO_2 , Y_2O_3 , La_2O_3 , MgO , SiO_2 , aluminum-silicate and CaP_2O_7 .
5. The electrodeless low-pressure discharge lamp of claim 1 in which the
UV reflecting layer has a coating weight resulting in a reflection coefficient of at
least 0.7.

5 7. The electrodeless low-pressure discharge lamp of claim 1 in which the ionizable fill comprises mercury and an inert gas, the UV-to-visible-converting layer is a tri-phosphor layer and the UV reflecting layer is of aluminum oxide with a coating weight of 4.5 mg/cm².